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***The Strategy of Processing Coffee Farming System in Temas Mumanang Village Permata District of Bener Meriah Regency Nanggroe Aceh Darussalam***

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**Abstract**

This paper is about strategies for how to process coffee in the coffee farming system in Temas Mumanang Village, Permata District, Bener Meriah Regency, Nanggroe Aceh Darussalam Province. This paper thoroughly and in-depth describes the ways of planting and maintaining coffee plants carried out from the first period to the fourth period, starting from making coffee seedlings, planting coffee seedlings, maintaining coffee plants, harvesting, and post-harvest handling (processing). The whole period has special ways that are the local wisdom of Gayo coffee farmers. This local wisdom is used as a reference to the farming system which until now is able to make the Gayo High Region as a coffee producer with Robusta and Arabica Coffee varieties to foreign countries.

**Keywords:** Strategy, Method, Wisdom, Coffee

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## **INTRODUCTION**

Coffee is the largest agricultural commodity in the world. Robusta Coffee and Arabica Coffee are the two main coffee varieties that are widely cultivated in the world. Coffee plants can only grow in the tropics, but the results of coffee are widely consumed throughout the world. Indonesia is the 4th largest coffee producing country in the world after Brazil, Vietnam, and Colombia with total production in 2016 reaching 639,305 tons and an area of 1,228,512 ha (ICO, 2017). South Sumatra in the region with the most production and the largest area in Indonesia, followed by Lampung, the two provinces producing Robusta coffee. Specifically, for Arabica coffee, the main producing area in Aceh province, followed by North Sumatra, South Sulawesi, and others.

The Gayo Plateau region in Aceh Province consists of 3 districts, namely Central Aceh District, Bener Meriah, and Gayo Luwes. This area not only has a very beautiful view but is also the largest Arabica coffee producing region in Indonesia as well as being one of the best Arabica coffee production areas in the world, where most of the coffee produced is classified as specialty coffee intended for export purposes. This place offers tourists access to visit Arabica coffee plantations

with tours of the fields and coffee bean processing plants

In this paper, a review of the form of local wisdom on how to plant and maintain coffee plants in the Gayo Highlands. Local wisdom becomes a unique local knowledge that belongs to the community that is built by the experience of the interactions of humans and others, as well as human and natural interactions. In the character of traditional society, local wisdom becomes an unwritten order and reference that is loaded with values, which regulates the patterns of behavior of the community in carrying out daily activities that are highly dependent on nature, so as to create a harmony of human life and its natural environment. Syafaat (in Bathlimus, et al. 2007) describes local wisdom as a view of life that has been directed about the relationship between communities or between citizens and their environment.

Salzman and Attwood (in Stacy McGrath, 2009: 1) explain that ecological anthropology focuses on the complex relationship between humans and their environment. Besides that, Tara Robertson (2009) Cognitive anthropology emphasizes the rules of behavior, not the behavior itself. This does not state that it can predict human behavior but rather illustrates what behavior is expected socially and culturally or is appropriate in

certain situations and contexts. This approach states that each culture includes its own unique organizational system for understanding things, events, and behaviors

Soemarwoto (2004) sees that local wisdom is not only a product of a local culture which is then passed down from generation to generation but is also related to the development of human life itself. The development of the times creates a pattern that can be an influence in the order of human life, so that it leads to the direction of development that follows the development of the times and technology but also has positive and negative impacts, or a life order that accepts developments but still makes the results of local culture including also local wisdom as the controller of development itself. Rahmawati (2004) said that one example of human relations with the surrounding environment is in forest management.

Some studies relating to local agricultural wisdom are Ani Susilawati and Dedi Nursyamsi's (2014) research on local wisdom in the agricultural system in the Central Javanese community known as the Surjan system. The Surjan system turned out to be a combination of local wisdom that was able to collaborate with technological innovations including water management, selection of adaptive plants,

minimum land management, checking swamp planting calendar which turned out to be a way for tidal land farmers to overcome climate problems from a local cultural perspective. So that climate problems that often plague their agriculture can be overcome and this step helps produce quality crop yields.

In the East Java agricultural system, this turned out to be local wisdom. This is known from research conducted by Ati Musaiyaroh and Panji Tirta (2016) which explains in detail how local wisdom in an agricultural system becomes a long-term relationship made by the community to meet the needs of life with an increasing population.

Humans are very dependent on nature and nature also needs humans for their management and preservation (Soekanto, 200). Local culture always produces local knowledge which becomes a view of life full of wisdom in helping the lives of local people, known as local wisdom. Wisdom contains a variety of local knowledge that is used by human groups in organizing their lives, even Clifford Geertz uses the term local wisdom (local knowledge). Geertz (1999) explains that local wisdom is a patterned policy in tradition and in which there are several dimensions. Its Namely, the dimensions of local knowledge, dimensions of local

values, dimensions of local skills, and dimensions of local resources. With a goal that is to set the pattern of community behavior that applies it in running their lives.

## **RESEARCH METHOD**

This study uses ethnographic methods by providing insight into the wisdom elements of how to plant and care for coffee plants in Gayo coffee farmers. To obtain data in this study, there are several steps in data collection techniques as follows: 1) The initial step is to review the literature relating to the research themes that have been published both relating to the coffee farming community and cultural change; 2) Then interview the community who are representatives of coffee farmers, coffee exporters, coffee farmers, and stakeholders; 3) Collecting documentation material through archives, photos, and newspapers. Data analysis uses domain analysis, taxonomic analysis, and component analysis proposed by Spradley (2007).

## **RESULT AND DISCUSSION**

Humans live in the world always interacting and adapting with nature. Humans adapt and interact to develop culture so that ecosystem changes occur. In anthropological science, the concept of

ethnoecology (the process of adaptation) is seen from the point of view (anthroposphere) of all spaces of human activity related to the environment (Hilmanto, 2010). In coffee farming in the Gayo Highlands there are ways of planting and maintaining coffee plants from the first to the fourth period, which in principle each period is almost the same, namely:

### **Making Coffee Seedlings**

There are several methods used by smallholders in this DTG to obtain plant seeds. The following are some of the methods of acquiring plant seeds that are commonly carried out by coffee farmers in this area, namely through the cuttange and grafting methods. The purpose of this connection is to get good properties from two different types of plants, for example by using a jackfruit tree trunk that is resistant to fungus as a rootstock. But for making seedlings by joining these methods, the number of new plants that are successfully obtained is limited, in order to obtain more numerous seeds, farmers will use other methods.

The steps for the process cuttange are as follows: (i). initially, the grower farmers will prepare a place of deposit (beds) by selecting a location that is considered appropriate for making beds; (ii). Furthermore, the soil is made into a

number of beds that are elongated in shape between 1.5 x 5 meters and 1.5 x 10 meters. (iii). on the beds, the soil is added as a growing medium derived from a mixture of soil, sand, and compost with a composition of 1: 1: 1. The compost used must be ensured not to be new compost, but one that is sufficiently cooked, if compost is still new it will poison the plant. As a substitute for this soil mixture, topsoil from the forest can also be used. But according to informants, this topsoil is more difficult to obtain. Thickness/height of beds about 25 cm; (iv). The beds will be roofed, which is about 60 cm above the ground level. On the roof there should be a shade, it can be lamtoro trees or other trees, the aim is to protect the results of the speckle so as not to get too much exposure to the sun's heat, also so that some of the sun's light can still get into the speck through the sidelines of the protective tree leaves.

Preparation of the material as needed. The steps are: (i). The material that is picked is taken usually from a plant called *ceding*, this *ceding* often appears at the top of the coffee tree. *Ceding* has a segment of approximately 6 cm and *ceding* already has at least 2 leaves; (ii) If the candidate has a lot of leaves, then part of the leaf is discarded, the aim is to reduce so that there is not too much evaporation.

Implementation of the screening, namely: (i). Existing batches are planted on beds that have been prepared previously, with a spacing of between 5-10 cm; (ii). The beds are then covered with a plastic lid; the goal is also to reduce evaporation; and (iii). Plants will be watered at least once every two days; you should instead be watered every day. How to water it is to open the lid with pressure, after finishing watering the lid is closed again; (iv). After 3 months, the plastic hood is tried to be opened gradually, the aim of which is to accustom the plant to the pressure to adapt to free air; (v). At the age of 6 months, the batch is transferred into a polybag (vi). Only one week can be planted in the field if it has at least 5 pairs of leaves.

### **Planting Coffee Seedlings**

After the coffee seeds are planted, there is still much work to be done immediately to produce plants that can grow well and produce the results that are expected. This process is carried out by removing the coffee seeds that have been prepared beforehand, either by means of checking or connecting. For most of the farmers in DTG, this is the initial stage of work, because most of them do not make the coffee seedlings directly, but buy the ready-made seeds from seed providers at a

price of Rp.2000 / stem. Planting is as follows: (i). Before planting the seeds, shade plants must be provided in the garden to be planted. Shade plants can be Chinese lamtoro / petai tree. Shade plants should not be too dense, but must be able to enter sunlight into plants with an intention of about 50 percent; (ii). Planting is usually done at the beginning of the rainy season, plants should not be planted when the sun is shining hot, to keep the planted seeds do not wither; (iii). The seedlings planted must be of sufficient age, then the leaves which have totaled at least 5 pairs must be watered as they were during the previous tapping to reduce evaporation. (iv). Next a portion of the taproot that is too long is cut so that it doesn't grow bent roots; (v) Seedlings are planted until all roots are covered with soil, then polybags are withdrawn and discarded; and (vii). If the seeds die, so it must be added / embroidered with new seeds. This stitching must also be done in the rainy season.

Apart from using the checking method, coffee seeds can also be obtained through grafting. The purpose of this connection is to get good properties from 2 different types of plants, for example using jackfruit tree trunks that are resistant to nematode attacks as rootstocks.

### **Maintaning Coffee Plants**

After finishing planting, coffee must always be treated, because coffee is a spoiled plant and requires intensive treatment to be able to give good results. Coffee that is treated gives results with a significant difference when compared to coffee without treatment. The usual coffee treatments carried out by smallholders in DTG are: (i). Pruning; (ii). Disposal of disturbing plants; (iii). Fertilization.

Local wisdom essentially contains a picture and knowledge (cognitive) of the community about matters relating to environmental structure (Ridwan, 2007). The farmers in DTG have done many local wisdom in strategy processing coffe. Coffee plantation land must always be cleared of the remnants of shrubs and weeds. Furthermore, the traces of land clearing are piled in one particular place. In the past, more cleaning was done by burning, but now there is a ban on burning weeds and traces of wood that are not needed, so the owner of the garden is now more set aside on the edge of the garden.

Periodically coffee plants must be given fertilizer to maintain their fertility. In the past without fertilizer even though these plants have been fertile and produce abundant fruit, but now must be assisted with the provision of additional fertilizer. Fertilizers given at DTG are generally not

chemical fertilizers because buyers are not willing to accommodate coffee that is given chemical fertilizers. Therefore, generally, farmers use compost fertilizer.

There are two kinds of fertilizers, chemical and organic, so here people plant lamtoro trees, their leaves contain high levels of nitrogen, and these leaves become substitutes for urea fertilizer. The trash from the coffee grinder, garbage from the grass during cleaning will become organic fertilizer; livestock/goat manure becomes fertilizer. In Wonosari, a village where most of the population is Javanese there are many goats, the average population there is raising goats.

Coffee trees, if not treated, can grow to reach a height of 12 meters and have many branches. The greater the size of the tree does not mean that more fruit is produced, because if the plant is too lush, it is likely that the fruit produced is small, because the nutrients the plant has spent on the growth of branches and leaves, not to grow or ripen fruit. To overcome this, trees must always be pruned regularly, too many branches must be reduced, preferably all sides of the plant should be able to sunlight, as well as grass under the feet of plants should be reduced. Coffee plants are not among the types of trees that will produce without maintenance, because untreated trees will not produce

the fruit as expected, both in quantity and also in low quality coffee.

Coffee care also includes replacing coffee from an old one into a young plant (regeneration). Old coffee, when it comes time will be replaced with a young coffee tree because when it is around 15 years old, the coffee tree is no longer productive, therefore it must be replaced with young plants. But the conversion of old plants into new crops is usually not done simultaneously on all land owned by a farmer, because if it takes place as a whole it will kill the income of the farmers concerned, for that it is usually done in stages, among others by planting in a portion of their garden area, while the rest is left to keep producing. It can also be done by inserting, ie replacing old plants that are no longer in production and allowing some of the others that can still produce. It can also plant "five eyes", which is to plant in the middle of 4 trees.

### **Harvesting and Post-harvest Handling (Processing)**

Postharvest handling of estate crops is defined as an activity of handling plantation products, ie from harvesting until it is ready to become raw material or the final product is ready for consumption (Mayrowani, 2013). Further in his book Mayrowani explains:

"Postharvest coffee technology can be divided into two major activity groups, namely: primary handling that includes handling commodities to semi-finished products or ready-to-process products, where product changes/transformation only occurs physically, whereas chemical changes usually do not occur at this stage. Second: secondary handling, i.e., the continuation of primary treatment activities, where at this stage there will be changes in the physical form and chemical composition of the final product through a processing process.

### **Picking/Quoting Red Coffee Fruit/Cherry Coffee or Coffee Bean (Primary Handling)**

Coffee plants have begun to produce results at the age of about 3 years or more after the planting period, depending on the type/variety of coffee. Especially for Ateng coffee, it has started at the age of 3 years, while Bourbon Coffee is 3.5 years. Starting with the first flowering that occurs at around the age of 2 years the process of flower development becomes a ripe coffee fruit (cherry) that is ready to be harvested, similar to that of humans, which is approximately 9 months in length.

Harvesting can be done in one of two ways, namely: picking plants simultaneously in one bunch, can also

select fruits selectively, only those that are ripe and leave the ones still green, these leftovers will be picked the next week after they are ripe. The first method is more focused on quantity and speed, not quality. Many areas are harvested only once, and all mature and raw seeds are picked. This practice is called choosing en Parejo (in pairs) and is much faster than choosing only ripe fruit. Harvesting is often carried out from morning to evening in about five to seven hours. Farmers in Gayo rarely work on how to quote directly at once like this. This technique is generally carried out by large overseas plantation companies where the harvesting process is carried out by a machine or other auxiliary equipment.

The coffee farmer community in Gayo highland also can not escape the phenomenon of globalization. Since having Gayo Arabica coffee as one of world-class coffee, they can not avoid the invasion of globalization (Puspitawati, 2017). Arabica coffee processing can generally also be done in two ways, each of which has a significant effect and determines the quality of the plant as well as the price when sold.

**Dry Method Coffee Processing Methods;** this method is considered to be the simplest and least costly method. In this method, usually, after the coffee



beans/cherry is picked, they are directly sun-dried on the ground / concrete surface. And usually dried in the sun until it becomes very dry which is marked by changing the color of the outer skin to dark and easily destroyed / fragile making it easier to separate the skin from the seeds.

**Wet Method of Coffee Processing;** this is a method that will produce the highest quality coffee, especially when compared to the dry method but this method requires greater capital. This method uses an outer skin breaking machine (called a pulper machine), then the skin is separated from the grain coffee by using water by washing it thoroughly. By using this pulp machine, coffee bean damage can be minimized in the presence of water. Through this wet processing, it can maintain the quality of the coffee.

Although the coffee harvest takes place gradually from April to June, and from December to February each year, in practice the work must be done very quickly. Because coffee should not be too ripe on a tree until it is black or until it dries. Because of this, the coffee picking season in large plantations absorbs a lot of seasonal labor. Seasonal labor (usually male) is brought in from villages around the plantation. They stayed in makeshift shacks built on the garden site. Besides working as pickers, they also handle the

sorting of green, yellow, yellow, red yellow and red fruits. The wages they receive are usually based on the results of their passages, with an average income of between Rp. 20,000 and Rp. IDR 50,000 per day from 6:00 a.m. 11:00 and from 2:00 a.m. 17:00.

This picking of coffee fruit is usually carried out around 9 months after the appearance of coffee flowers. This fruit picking is very influential in determining the quality of the coffee. The fruit that is picked too young has not been able to bring a distinctive aroma that is very preferred by consumers of coffee, preferably, too ripe fruit is also difficult to produce high-quality coffee. Because of that, the right time is the fruit has matured but not too soft; the level of maturity of this coffee is characterized by changes in skin color from green to yellow to dark red. Good coffee beans and preferred by consumers generally come from coffee fruit that has been fully cooked.

The picking of coffee fruit by smallholders in the Gayo Highlands is still done traditionally and manually using simple equipment. Until now not yet found a tool that can pick fruit simultaneously. According to farmers, even if there are tools that can be used to pick this fruit, it is feared that the fruit to be harvested is not only fruit that is of sufficient age but will

also be included in fruits that are still young and small. If the fruit is quoted by hand, the picker can choose fruit that has the right level of maturity.

In general, almost all smallholders and coffee traders in DTG agree that this harvest process is essential in influencing the overall quality of the coffee. Harvesting / quoting of coffee beans/coffee cherries that are perfectly ripe determine the process of further processing of coffee, and ultimately also determines the quality of coffee beans produced. The cited coffee is not in a perfect ripe condition, it will be difficult in the next process, the delayed processing of coffee will reduce the quality of coffee beans, and this causes a decrease in price.

The way the quotation takes place is as follows, the peasant farmer will take the rotating fruit as illustrated in the following sketch, usually starting from the ground located at the lowest location and then slowly turning upwards. The reason for the citation done this way is so that there is no need to go back and forth carrying bags of coffee that have been quoted because generally the location of the farmers' farmer's house is located at the highest location of their garden land.

Quoting coffee also cannot be done by cutting directly the branches of the tree to be taken. This method not only damages

the trunk of the coffee tree, and makes the coffee that is still green on the branch will be wasted, but also this causes the stem to be quoted to fall and hit the ground, this will cause the resulting fruit to become dirty because it is exposed to the ground or wet. The fruit took directly from the branches/branches where it will produce clean coffee and will dry quickly, even though it is dried in low temperatures.

How to pick coffee from the stalk also has a certain technique, and must be done carefully, because not all fruit can be picked at the same time, changing the fruit from green to red takes place slowly, from one part to another. fruits that are not old enough should not be picked because they can damage/reduce the quality of the coffee picked as a whole, as well as fruits that are too ripe, have also reduced quality.

### **Coffee Processing (Secondary Handling)**

Coffee is not a fruit that can be consumed directly without being processed first. To be consumed coffee requires several processing stages. Coffee beans traded are dried coffee beans that have been discarded of fruit flesh, horn skin and epidermis, which are referred to as green beans (rice coffee / in Gayo is called rice only or *hijo*). To get this green bean shape, the coffee fruit must experience some level of processing. Coffee

processing has begun from the citation stage of coffee fruit on the tree and then continues with several processes that require a lot of time to get to the form of ground coffee. Every process carried out will affect the quality of coffee produced.

Fruit which is left in the bag for overnight or which is left in the sun for a long time will produce coffee with a less pleasant taste, the circumstances of this occurrence are unknown, depending on the heat of the sun, the fruit contained in the bag/sack generally gets hot from the activity of microorganisms in the fruit which is directly processed when the fruit seeds are still fresh. This is probably due to the heat causing the process to change the taste of the seeds produced, another possibility of low oxygen in the sack causes metabolic reactions of the seeds that produce undesirable flavors (Peterson, 16).

Thus, the processing must be carried out as soon as possible a few hours after the citation of the fruit is done and continues until it is finished without being interrupted by other actions. If the time between citing goes to processing is too long, it will produce damaged / flavored coffee beans. To maintain high-quality coffee, this process must take place quickly. However, in each country/place

this process works differently, depending on long-standing local customs.

Judging from the way of processing post-harvest coffee, three methods of handling are generally known, namely: the wet method (wet milling), the semi-wet method; and dry method. Which method will be chosen by farmers and coffee farmers, generally depends on the habits of the local community. In coffee-producing countries in Latin America, such as in Brazil, Cambodia, for example, the method used in the post-harvest period is usually the same. While in Indonesia, there are differences from one region to another. In South Sulawesi, for example, the wet milling method is used. Meanwhile, in Sumatra, it differs from place to place. for example in Mandailing, Sidikalang, and Gayo, the semi-wet method is used, in other places, there are wet milling and some are using the dry method.

The processing process gives an influence on the quality of coffee produced, the quality of coffee can be known based on the grade/level of coffee. High grade illustrates the better quality, the determination of this grade is seen based on the percentage of the number of damaged or defective coffee beans.

To remove the epidermis layer/onion/silverskin, which is the deepest layer of skin before the coffee

beans are thin and transparent. The removal of the epidermis layer uses a huller machine. After this skin is removed, comes the depe coffee beans which in DTG are referred to as green or ordinary coffee referred to as "*hijo / green*" only. The last step before shipment is to separate coffee using a filtering/milling tool. This filtering is to separate the coffee on its seed size. This filtering has different hole sizes, there is a 5 mm hole to obtain grade 1 beans / the rest is random coffee. *Asalan* coffee is coffee that is sold conventionally, generally for the domestic market.

After the coffee is selected by using filtering, the coffee will be selected again, this process is called depe. Depe means double pick Different from filtering/milling which chooses coffee with a large size of beans, so when this depe, the coffee chosen is bad coffee, which will be set aside. So this process is taking coffee that is not according to standards. Seeds that are set aside are chopped, which are broken, black or rotten. Only after this depe can the coffee beans be included in the group coffee of the highest quality/grade 1.

The next stage of handling post-harvest coffee; in the past farmers sold grain so that the sale could not be directly after the coffee was picked, so farmers could not directly get money; now farmers

directly sell cherry coffee/fresh coffee fruit without first processing.

### **Fruit Selection or Sorting**

After completing the quotation of fruit, the next step to do is selecting/sorting the fruit. The fruits are sorted on their maturity level into three types, namely red, yellow and green. These three colors show different levels of maturity of coffee fruits that have been picked. Sorting the level of fruit maturity is also important because it will later affect the results of coffee milling. This is due to differences in treatment starting from the process of fruit grinding (pulping), fermentation, drying and scraping the seeds of red, yellow and green fruits because the coffee will be ground by combining fruit with the same level of ripeness. If the fruit milling is united between red fruit and green fruit (young), the risk is that the green coffee fruit is destroyed to the seeds, the skin of the yellow fruit is still intact while the red fruit is only crushed by the skin of the fruit. With a different treatment, grinding green fruit can be softened, until the skin of the fruit is broken but the seeds are not destroyed. Before being ground, the coffee fruit is often soaked first to distinguish good quality coffee or not. Good coffee fruit will sink because the seeds are heavy,

while coffee fruit that floats in water is usually bad coffee, the seeds are hollow or attacked by powdered pests. Only sunken fruits are ground. After the fruit is ground, it is immediately fermented.

**Post sorting coffee processing**, the diversity of wisdom in the local culture embodied in ethical and moral values, and norms that prioritize the preservation of environmental functions (Hadi, 2009:23). There are two common coffee processing systems, which are wet processing and dry processing or natural processing. In wet processing, the equipment is used to divide the seeds from the fruit, producing significant by-products, 'pulp', the skin and parts of the 'slime' (mesocarp) of the fruit, the main product is 'parchment' coated thick with mucus. parchment is traditionally fermented to reduce mucus so that it can be easily washed but can also be removed immediately by the machine. After removal of the mucus, the parchment is dried, usually by sun-drying on cement, brick or table terraces. There are many variations and technological innovations for this generic scheme but it is outside the scope of this treatment to illustrate this.

In dry or natural processing, the fruit is placed directly for dry processing in the sun with or without steps to separate the good and bad coffee fruit by putting

cherries in the water, then selecting the fruit to sink and throwing the fruit that floats on the water. To dry it can be used various places / as a base, can be directly placed on the ground, can also be on a cemented surface, bricks, tarpaulin mats and all surfaces that can be used for sun drying. With this method, the separation of fruit tissue from seeds is achieved later, in a dry state, it will produce a thoroughly dried fruit product.

The milling step is usually done outside the garden, but usually at locations not too far away to facilitate the transport of coffee. Although drying is the most common drying method for coffee, mechanical drying is important in some areas, especially in more capitalist sectors such as plantation companies, However, in DTG itself all still use natural drying by utilizing sunlight. Even here, sun drying is usually used for an important part of the drying period because a mechanical dryer that not only requires high cost, but also limited capacity.

To mark a coffee bean that has dried completely can be done manually by biting it. If the coffee beans can still be bitten by leaving bite marks, it means it is still not dry. Seeds that are completely dry if bitten will not leave marks. Another way to determine the level of drought is to measure the clothesline with a can and

weigh it. With the same volume, for example, one full can, different weights will be obtained. This volume and weight ratio will determine the coffee bean's water content. The volume and weight ratio for green, yellow, yellow, red yellow and red seeds varies. If the water content standard is reached, drying is stopped. Dry fermented beans must be sifted to remove the pulp before being mashed. While the results of wet fermentation that has been cleared of pulp, just enter the dryer, then later mated.

**The process of grinding/ peeling the coffee skin (pulping)**, the fruit that is picked must be separated from the flesh as soon as possible with the seeds. If immediately after the harvest is carried out, the quality of the coffee produced will be maintained. But what often happens is that the handling of the fruit that has been picked is delayed, it can be one day or a day and night, then this will result in a decrease in the quality of the coffee beans harvested. The process of removing the coffee skin from the fruit is called pulping. Then the coffee beans are soaked in water to remove the mucous layer.

To remove the skin of the coffee fruit from the seeds, several techniques are carried out. In the past, farmers in DTG peeled coffee beans pounded using a wooden mortar. But for a long time (about

30 years) farmers planters used a machine to separate the skin from the seeds. The machine can be their own or wage it at a coffee mill by paying a sum of service fees. Before using an automatic machine / using electric power as now all farmers planters do, a few years ago it was still common for fruit milling to separate this skin by cursing the machine manually operated milling, by turning the engine crank by hand. This manual grinding machine can now be said to be no longer used by smallholders in this place because the process of using this manual machine is very impractical and requires a long time, as well as being tiring.

After the coffee is ground, the next step to dry the mucus layer (in Gayo is called sele) is that coffee is traditionally dried and removing this mucus from the coffee beans takes 36 hours. This process is referred to as fermentation, the method is as follows: after the coffee is ground, then put into a container in the form of a sack and the sack and the coffee are left standing. Then the coffee will be washed to remove the remaining mucus layer (after fermentation the mucus will decrease). Furthermore, the coffee beans which still have a shell layer are dried. This is what is called grain coffee.

Arkanuddin said that Local values and knowledge are embedded in people's

way of life as a means to survive survival (in Pandapotan, 2018). Indigenous Knowledge tradition people too important of local environment (Suharyanto, et.al., 2019). Local wisdom develops in ways and practices developed by humans, from their deep understanding of local environment (in Nurjannah, et.al., 2019).

**Drying Coffee Beans**, after the coffee has been washed, the coffee will be dried, generally carried out directly in the sun, therefore at these time farmers are in dire need of hot weather. If the sun is nice (they call it "there is a day"), this process only takes 2-3 days, but not infrequently they need up to a week. If the day continues to rain, then it takes even longer to dry it. very often cause the quality of coffee to be much decreased, because coffee that does not get sunlight during the process of drying is very often musty and the color will also change, this will later produce unpleasant coffee, which will be proven when the cupping test is done. process by removing the hard white skin of coffee known as parchment or hull, until the surroundings turn green, this is what is called *hijo* coffee according to the version of the local grower farmers and green bean its international name generally in DTG processing into a wet huller is preferred for sunlight though in a cooperative-operation and some plantation the DTG

parchment will dry completely. Be careful to maintain coffee in the coffee maintenance rules to get world market prices. As an 'aged coffee' for wet parchments, green coffee must be dry and contain about 12 percent humidity/moisture content. That must be sold as soon as possible.

Drying is a method of drying coffee fruit that is relatively safe from the risk of damage to the quality and taste of coffee beans, the best results will be obtained if enough sunlight, this method is generally applied by farmers. Drying will be done by spreading the coffee fruit on the drying floor, woven bamboo, plastic or compacted soil surface. Large plantations usually still use drying because of economic considerations and yield quality; generally drying facilities on large plantations are relatively more advanced and better.

## CONCLUSION

For the Gayo Community, coffee is not a foreign plant but has been known for generations. The name Kopi Gayo is now widely known, not only in Indonesia but also in foreign countries. The world-famous name of Gayo is suspected because of coffee beans which are the mainstay products of farmers from this area. Along with the entry of Gayo coffee into the world trade arena, now coffee is not only a

distinctive crop but has become the main crop planted using detailed economic calculations.

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